ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

DATE: March 10, 1978

TO: John Shum, Jr.

FROM: Ron Gehrig

SUBJECT: Facility Verification: Gates Galesburg Hose Plant
I. D. #095 808 AAB
Galesburg/Knox County
Ø2111011 (14 sources)
Ø2111242 (#4 boiler)
Ø6030031 (6 oil storage tanks)

On March 2, 1978 a facility verification was made for the above subject facility. I met Charles M. Meyers, Jr., Plant Engineer, and the three operating permits were reviewed. A source by source audit was made including a plant tour for identification. Source #006 (Ø2111011) has had Cover Extruder #514 removed and the baghouse also. This now leaves only 02 identical sources.

A copy of the fuel oil specifications was obtained to update Boiler #4. This concluded the verification of the facility whose estimated emissions are:

TSP	8.3 TPY
SO_2	40.5 TPY
NOx	33.4 TPY
HC	23.0 TPY
CO	6.2 TPY

RLG:dc
Attachments
cc: MAZ/DAPC
Permit Section/DAPC

RINEHART LABORATORIES, INC.

5810 LAMAR STREET • ARVADA, COLO. 80001 • P.O. BOX 564 • PHONE 422-4020

R. W. RINEHART, Sr., Ph.D., Pres.
A. W. STONE, Sec.-Treas.

Reference No. 770361
Nov. 9, 1977
Work Authorization No.
801900000000100

To: Mr. E. W. Karger
Gates Rubber Co.
999 So. Broadway
Denver, Colo. 80217

Subject: Analysis of Three Fuel Oils.

Results:

Sample	Sp. Gr.	BTU/lb	Sulfur
1.) S of Power House	0.8474	19,500	0.27%
2.) East Tank	0.8427	18,500	0.17%
3.) West Tank	0.8430	18,700	0.24%

Robert W. Rinehart, Sr., Ph.D.

H. D. Harris
Vice President
Engineering

The Gates Rubber Company
999 South Broadway
Denver, Colorado 80217

November 14, 1977

M. Paul Schmierbach, P.E.
Manager, Permit Section
Division of Air Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

Dear Mr. Schmierbach,

An application for a renewal of three permits at the Gates Galesburg hose plant was made on September 26, 1977 to your office.

Your letter of October 6, 1977, referenced as application No. DO 2 11 1011/ID #095 808 AAB No. 4 Boiler, denied the renewal of a permit for No. 3 boiler and mentioned additional items which are not part of the No. 4 boiler permit. This was an apparent answer to the renewal application of September 26, 1977.

The following data is offered to clarify questions you raised and show that emissions do not violate air pollution control regulations.

PERMIT APPLICATION NO. 02111011 I.D. No. 095808AAB

1. Dyeing Tank

   Production data for the current year shows that 3.1 pounds per hour of toluene and 3.2 pounds of rubber solvent are utilized in this operation.

   This does not exceed the 8 pounds per hour limit of Rule 205(f).

2. Horizontal Braiders

   114 horizontal braiders are operated at the plant. 53 of these braiders are fitted with adhesive and/or dye/dip tanks.

   Production data for the current year shows that emissions at a single braider equal 0.7 pounds per hour of toluene and 0.1 pounds per hour of rubber solvent.

   This rate does not exceed the 8 pounds per hour limit of Rule 205(f).

3. No. 3 Boiler

The No. 2 fuel oil in the three storage tanks was tested by Rinehart Laboratories, Inc. of Arvada, Colorado and the results obtained on November 9, 1977 indicate that the sulfur content varies from a low of 0.17 to a high of 0.27 per cent sulfur (copy of the analysis is attached).

Calculations using USEPA emission factors and the 0.27% sulfur content values indicate that SO_2 emissions are 0.2779 pounds per million Btu input.

This rate does not exceed the 0.3 pounds SO_2 per million Btu input limit of Rule 204(c)(2)(B).

Page 8 of the original permit application should be revised to show:

sulfur content 0.27 max. heat value 19,500 Btu/lb.

4. Cement House Emissions

In the Cement House, various adhesives (cements), dyes, washes and dips are prepared. The adhesives are basically rubber dissolved in a solvent.

Straight sided, upright cyclindrical mixers are utilized. Rubber, solvent and/or other chemicals are introduced thru a hinged top on the mixer, the top is closed and the mixture is agitated to accelerate the "dissolving" process. When the mixing is complete, the solution is discharged to a drum or other vessel for delivery to, and use inside, the plant.

Fugitive emissions escape from the mixer during filling and emptying. Careful measurement of the ingredients going into the mixer, the completed mix and residual material were conducted on similar equipment at the Gates Denver Cement House. These measurements showed that fugitive losses for toluene, hexane, and ethyl acetate were 0.5% and for other solvents were 0.2%.

These values have been used in calculating emission losses at the Galesburg Cement House.

PERMIT APPLICATION NO. 02111242 I.D. No. 095808AAB

No. 4 Boiler

The No. 4 boiler utilizes the same No. 2 fuel oil that is used by No. 3 boiler. The emissions are, therefore, identical and the SO_2 standard is not exceeded.

Page 2 of that original permit application should be modified to show:

sulfur content	0.27 maximum
heat value	19,500 Btu/lb.

It appears from correspondence received by Chuck Meyers at the Gates Galesburg plant that permit applications No. 02111242 and No. 06030031 have been approved for renewal.

It is hereby requested that the permit application No. 02111011 likewise be approved and copies of all approvals be issued to me.

Very truly yours,

H. D. Harris

H. D. Harris
Vice President, Engineering

cc: Lowell Rose
H. B. Dutell - Galesburg
Chuck Meyers - Galesburg
E. W. Karger - PEPP

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